137 *Rakh* (*Salvadora persica* L.) is a very popular fodder with camels
314 and is found in abundance in the Wadi Maseila; it is also fairly
246 common round Du'an but practically non-existent to the north of Shibam. Goats do not eat it. It also provides the Beduins with their favourite toothsticks.

Khuweira, a small plant (*Cassia obovata* Coll.), is very popular with both camels and goats. There are of course many other plants on which they graze.

Manufacturing Industries.

496 Minor Industries include the extraction of simsim oil with camel
262 mills. In Mukalla there is a large oil factory with 31 compart-
249 ments in each of which a camel turns the usual primitive wooden machinery for expressing the oil from sesame seed. The oil extracted by this primitive process is much more popular for food that that extracted by modern machinery. It is considered much
[231] sweeter. The residue forms a cake which is fed to camels.

339 There are kilns for lime-burning immediately to the east of
438 Mukalla and in many other places. In particular most excellent
353 lime is made in Seiyun and Tarim. This is applied as a plaster to the interiors of the houses and polished with smooth flints till it resembles marble.

28 Hides from the interior are tanned in Mukalla but none is exported. At Gheil ba Wazir I saw a leather-worker using Mukalla-tanned skins. Skins are also tanned in Shibam. The dyeing of cloth, weaving, and mat-making are other minor industries. Shihr in particular is well known for its beautiful
323 weaving. There are potteries in many places, and I saw the process
346 in Gheil ba Wazir. There are also good workers in silver at Gheil ba Wazir, Shihr and Mukalla.

Fisheries.

228 The manufacture of fish fodder and manure and the preparation
251 of dried fish is a large industry of the coastal area. From an
262 export point of view, fish products come third in importance. They
231 are :—

438 *Sifa* (fish oil). Not much of this is made in either Mukalla or Shihr. The bulk is imported from the Mahri coast.

Wazif (dried *'aid* and other small fish). A great quantity of this is prepared in Mukalla and still more in Shihr. The sea is alive with these small fish, the catching and preparing of which gives work to many hundreds of fishermen. In both Mukalla and Shihr there are godowns for these fish which are stored before being taken to the interior for manure, camel fodder, or human consumption. The very small *'aid* fish are used for manure only, but the larger ones are eaten uncooked

by men and also serve for fodder. It is sold by *ma'bar*, a basket of about 30 to 40 lb. The price for eight baskets is from one to three dollars.

Hanīt (cooked and dried *tamad* fish). About fifteen to twenty *bahars* of this are made a day in Mukalla and sold for local and up country consumption.

Safīf (dried *tarnak* and *tamad* fish). This used to be made only from the *tarnak* but now includes *tamad* as well.

Lakhm (dried shark). A great deal is prepared in Mukalla and one *frasila* costs one and a half to two and a-half dollars.

Rīsh (shark fins). A certain amount of these are exported to China.

The fish manufactories have been removed from the town of Mukalla, a sanitary measure for which credit is due to Sultan 'Umar. The drying-grounds and godowns for *wazīf* are situated beyond Therb, the camel park, outside the western gate. Here too there are old fish-oil tanks. The drying of fish for human consumption takes place at Al Khalf, east of the town, and here large godowns for storage and export are in process of completion. Dried fish forms a staple article of diet of the population. It is also a valuable manure and a widely-used fodder for animals. The extent of this coastal industry may be judged by the millions of gulls lining the seashore and the ever-pervading smell in the coastal towns.

Mr. Heald, referring to the fish-curing industry, writes " Along the coast in the various villages, a primitive fish-curing industry was carried on for sale in the interior, which consisted merely of digging a hole about one yard deep and half a yard broad, lined with stone; in this, wood was burnt and then the large-sized fish were placed in the hot ashes and covered over and left for 24 hours, afterwards taken out and sent up to the interior for sale. I was informed that the cured fish would keep for a considerable length of time, but, as a word of warning to intending travellers in this country, I strongly advise them not to allow any of their luggage especially bedding to be put on the same camel carrying the fish, as the smell was abominable and tainted everything it came into contact with. The Beduins on the journey fed their camels with the small sun dried fish and also partook of the same themselves without any attempt at cooking."

Visit of Agricultural and Geological Experts in 1919.

Agricultural Report.

At the request of the Sultan, then Sir Ghalib bin 'Awadh, K.C.I.E., experts were obtained from Egypt to examine and report on the agricultural and mineral possibilities of certain parts of his territory

From the tongue of land we pass the fish-market, where a lively trade in the dwellers of the sea, here so multifarious, is carried on from early morning till late in the evening. The shark seems to be the commonest fish. Sacks full of dried and salted shark's flesh are sent into the interior, where, in times of prosperity, the Bedouins and townsfolk enjoy a piece of it with their frugal meal of bread and rice. The smell of badly dried and, consequently, somewhat decaying fish accompanies the traveller far into the wādīs of Ḥaḍramaut.

The bazaar of Makalla has more penetrating odours than is usual elsewhere. Not far from the fish-market are the workshops where loin-cloths and head-cloths are dyed a dull blue-black with indigo, and this trade also has sickening, nauseating smell. The workers and their houses are covered with a layer of indigo.

A more attractive trade than these is plied in this long street of the bazaar — that of the weavers and lace-makers. They weave narrow lengths of cloth with brightly coloured stripes and with very attractive fringes, which are woven separately.

All sorts of sweets were offered for sale at the booths; also the first bright-yellow or deep-red dates, not yet quite ripe, tuberous fruits, spices, the celebrated Ḥumūmī tobacco in big bundles consisting of whole dried plants; broad waist-bands, Japanese, Indian and Dutch piece-goods, sugar-loaves and rice, coffee-beans and dried coffee-husks, ginger-root and tea from Ceylon and Java, various kinds of grain, meal and *samn*, sesame oil and kerosene, matches and coffee-cups, *djambiyas* [1] and cartridges.

We wandered through this storehouse of Ḥaḍramaut. The salesmen had lighted their reeking lamps and torches stuck in bottles; one could only pass slowly through the swarming crowd with the smoke of the lamps mingling with the heavy odour emanating from men and things. As in a dream we

[1] *Djambiya*, correctly spelled *djanbīya* (جنبية), is a broad, curved dagger worn in the waist-band in front of the body.

6:Gt. Brit. Colonial Office G-3 (1948) 1950 MM1 Aden
Hadhramaut MM2.

the north-east Yemen Plateau, but local rain was sufficient and caused damage to the wheat and barley crops when at the harvest stage.

In the districts west of the Bana *kharif* conditions in Lahej and Subeihi country were good, but in the highland districts rainfall was insufficient for crop production over most of the year. In Abyan which is watered by the Bana and the Hassan rivers where they enter the coastal plain, a weak flood season was experienced, but this resulted in effective flood control, and on the balance, in satisfactory crops. East of the Bana and the Abyan district, conditions in the *kharif* were bad. Lack of rain in most districts reduced crop production based on a rain and flood irrigation system to nothing. Fodder supplies needed for sustaining the animals working the water lifts in permanently irrigated areas were reduced, and lowered production from what should normally be a reliable source.

Livestock suffered and were reduced in numbers as a result of poor flood conditions caused by insufficient rain. A secondary factor which seriously affected camel owners and transporters in the Eastern Protectorate was a dearth of the sardines which are usually caught in great quantities on the Hadhramaut coast and used in a dry state as fodder for livestock.

Crop Production

	Acres	*Tons*
Western Aden Protectorate		
Millet—sorghum	40,000	8,000
Bulrush millet and other small millets	7,500	1,125
Wheat	1,500	750
Barley	4,500	3,000
Sesame	5,500	550
Eastern Aden Protectorate		
Millet—sorghum	5,000	1,700
Bulrush millet and other small millets	1,000	200
Wheat and barley	3,500	2,500
Date palms	10,000	4,500

Pests and Diseases

No report of locust activity was received during the year.

Rust is probably the most important plant disease in the Aden Protectorate. In 1948, little damage was recorded from this disease.

Animal Health

No rinderpest was recorded during the year. Goat virus was imported from Kenya and used for the immunisation of cattle in Abyan. Horse-sickness vaccine was used in Beihan, Abyan and Lahej.

	Western Aden Protectorate	*Eastern Aden Protectorate*
Camels	30,000	45,000
Cattle	50,000	8,000
Goats	400,000	320,000
Sheep	110,000	50,000

6:Gt. Brit., Colonial Office G-3 (1948) 1950 MM1 Aden
Hadhramaut MM2

trade in dried fish. Other fishing communities are small and the greater part of their population nomadic for part of the year. 226 [361]

Apart from the occurrence in summer of large migratory fish as described under the Aden Colony fisheries, there is a considerable cast-net fishery for sardines along the sand beaches east of Aden. West of Aden, sardines are rare but a small anchovy supports a fishery during the winter months.

Craft and gear are as described under Aden Colony fisheries.

Eastern Aden Protectorate

The fisheries of the Eastern Aden Protectorate are primitive but very productive. Previous observers have estimated the annual catch as over 50,000 tons of wet fish.

Sardines belonging to several species of Sardinella and Dussumieria normally abound on certain stretches of coast east of Mukalla all winter, when they support a very extensive cast-net and beach-sein fishery. Utilisation is wasteful, the fish being either sun-dried for fertiliser and animal fodder or else rotted in order to free a putrid oil. The winter of 1948–49 has unfortunately been the worst sardine season within living memory. [228]

Kingfish (*Scomberomorus*) abound in the vicinity of the sardine shoals and are taken in large quantities in nets and on handlines. They are exported either wet-salted as " maleh " or salted and sun-dried as " safif ". [439]

Three species of tunny and several other large pelagic fishes are caught in considerable numbers and salted.

Sharks are taken in moderate numbers. The town of Qu'sair specialises in this fishery and sends small dhows to the Somali coast for the purpose. In general, the Somali coast is reckoned to be a better shark ground than South Arabia.

These fisheries are worked from huris, sambuks and small dhows as described under Aden Colony fisheries, using the most primitive gear. So great is the abundance at high and low tide close inshore, however, that even by these means the catch per man-hour exceeds that of many fully mechanised fisheries elsewhere.

During 1948 the fisheries of the Gulf of Aden, and particularly those of the Eastern Aden Protectorate, were surveyed under a Colonial Development and Welfare Scheme, with a view to promoting their more efficient exploitation. The original schedule was unfortunately upset by failure to get two vessels equipped in time at Aden, but, although this hampered the work, experimental canning was carried out and liver oils tested for Vitamin " A " content early in 1948. Towards the end of the year, a taxonomist was appointed to confirm the identity of the commercial species. A full report on the survey will be published during 1949. 654 647

Following on the early findings of the Survey Party representatives of the Colonial Development Corporation arrived on the Eastern Protectorate coast towards the end of the year in order to go more fully into commercial possibilities. Unfortunately their visit coincided with a particularly poor sardine season.

7: Gt. Brit., Colonial Office G-3 (1949-50) 1951 MM1 Aden
Hadhramaut mm2

311 471 Inhabitants of Wadi Du'an, an area with an ever-present threat of famine, were persuaded to purchase some of the large tracts of good arable land and shallow wells lying fallow and idle in the main Wadi Hadhramaut in the hope that they will gradually move from their over-populated wadi. Three companies were formed by Duanis, with a capital of well over Rs. 1,00,000 for the purpose of cultivating hitherto dead lands at Dar-Assab, Aqad and the area at Hautat Ahmed bin Zein in the main wadi, while Du'an merchants began to take an interest in existing date palm groves in the area. The local States were empowered to allot dead lands to farmers if the owners failed to cultivate them.

An agriculturai syndicate formed to develop the Meifa area of Wadi Hajr with a capital of Rs. 4,00,000 has been active during 1950. The planting of date palms in the area has started and the syndicate [164] allotted lands and gave advances to some 240 Subians—but up to now there is some reluctance on the part of agriculturists from other areas to settle down and work in Meifa owing to the prevalence of malaria there.

In November, 1950, two windmills were imported for experimental use in irrigation, one being installed at Buweish in the coastal area, the other being sent to Sai'un.

Co-operation

474 The Beihan Farmers' Association had a difficult year. A large proportion of the barley crop had been sown early and, in January and February, frost damaged the heading crop, seriously reducing yield and quality. As a result the Association deferred collection of up to 50 per cent of the outstanding loans which were carried over to the Saif and Kharif crops and to the winter crop of the 1949-50 season. Excellent conditions at the end of the year gave the Association full confidence in its operations.

The credit facilities for seed and cash given by the Association enabled the cultivators to carry on without much recourse to merchants and moneylenders.

FISHERIES

228 The Fishery Department did not begin work on a permanent basis until the end of 1949. During 1950 activity has been mostly exploratory. Unfortunately, winch trouble in the fishery vessel severely limited the amount and nature of the trial fishing that could be done, but practically every fishing village in both Protectorates was visited, and also the islands of Kamaran in the Red Sea and Kuria Muria, 700 miles east of Aden off the Muscat coast. The information obtained about the fishing population and its activities forms a valuable basis for development plans.

In general, the observations made in the 1948 report still hold good. The winter sardine seasons of 1949–50 and 1950–51 have, unfortunately, been little better than 1948–49. There has been a definite but slight improvement, but catches of sardines and their attendant predators are

7: Gt. Brit., Colonial Office G-3 (1949-50) 1951 MM1 Aden
Hadhramaut mm2

still far below anything within living memory prior to 1948–49. In consequence there has been no surplus for export from the Qu'aiti coast, the Qu'aiti merchants having had, in fact, to import much of the small surplus from the Mahra coast for consumption inland. 228

Six fishery statistical posts have been established on the Qu'aiti coast in the Eastern Aden Protectorate and three in the Abyan area of the Western Aden Protectorate. They are financed by His Majesty's Government through the Fishery Department, but are administered by the states in which they are situated.

Because of the poor fishing seasons plans for promoting the export trade have been postponed. Preliminary trials are in hand for salt-curing sardines on the Eastern Aden Protectorate coast, to provide a cheap protein food for the agricultural labourers in the Wadi Hadhramaut and the Abyan area. The first small batches of fish were very well received. Now larger quantities are being tested for keeping qualities, as the most acute shortage of cured fish occurs during the summer when no sardines are being caught. At present the poorest people eat the dirty and rancid sun-dried sardines in the wadi and semi-putrid small fishes in Abyan. 228 258 262

A scheme is in preparation at Shihr, on the Qu'aiti coast, for mechanising the local fishing sambuks with outboard motors. These craft are sewn together with coir twine and are too flexible to take a normal inboard installation, but by fitting a flat hog in place of the keel, it is possible to ship an outboard motor through a trunk. The Qu'aiti State has financed a loan to a selected fisherman with which he will purchase the first sambuk and outboard. The sambuk is now being altered under Fishery Department supervision, and the Aden agents have the engine waiting. 501 228 654

An interesting development on the Qu'aiti coast is the building at Mukalla, for a local merchant, by Italian engineers and technicians, of a cannery with a capacity of from 500 to 1,500 yellow-fin tunny per day. This merchant has also recently brought an 80-ft. diesel-engined fishing vessel from Italy as well as two small motor launches. The cannery is in operation and samples opened have proved to be excellent. It is to be hoped that the project succeeds, as it is not only a bold step deserving of success as such, but also a source of local employment and of exports, both of which are needed in that area. 255 228

Chapter 8: Social Services

EDUCATION

General

Education in common with other services is under the immediate general guidance of the British Agents. The Aden Government Department of Education gives such advice and assistance as is required, and co-ordinates, so far as is possible, educational development throughout 871

ADEN MM1 HADHRAMAUT MM2

established to supply the local market—for the processing of soaps, pressed aluminum utensils, cigarettes, pottery and textiles, the extraction of sesame oil, the cutting of buttons from trochas shells and the building of dhows. Fishing is of potential importance, but its development is handicapped by primitive methods of procurement and handling and inadequate local transport facilities. The agricultural resources of the Colony are limited to market gardens and date groves on the oasis of Sheikh Othman.

Agriculture and fishing are the principal occupations of the tribesmen of the Protectorate. The fisheries of the eastern districts are reputed to be among the richest in the Middle East, while the drying and salting of fish and the manufacture of fish oils, fodder and manure are valuable industries in the coast towns. A large proportion of the people in Western Aden Protectorate and the Hadhramaut engage in agriculture, although the tribes of the steppe country are mainly nomadic pastoralists. The expansion of farming is curtailed by uncertain rainfall and shortage of water supply. In the Eastern Aden Protectorate, cultivation is restricted mainly to the middle portions of the Hadhramaut valley, where the river flows for part of the year. This region is historically famous as a source of frankincense and myrrh. Elaborate terracing and irrigation are employed in many areas for the conservation and the utilization of the limited water resources available. It was estimated in 1948 that less than 0.5 per cent of the total land area was suitable for farming, but the relative extent of pasturage and desert has not been determined. Systems of peasant ownership, tenancy farming and tribal land tenure prevail in different localities. The improvement of agriculture and expansion of irrigation are prominent among the development programs for the Protectorate. A co-operative project for the cultivation of cotton and other crops by modern methods has recently been initiated on 5,000 acres in the Abyan area in Western Aden Protectorate. Little

A 471
A 228 244
H 228 241
H 241 361
H 241 311 [245]
H 423 654
880

ably meager. The basic foods are usually breads, dates and milk products, supplemented by vegetables and fruits in season and by varying amounts of meat and fish. Although breads are most frequently prepared from sorghum millet (durra), other forms of millet, as well as maize, wheat and barley are widely used. Rice is generally popular, and large amounts are imported. Dates constitute one of the main food items throughout this region; date palms flourish along some wadies, but the annual crop is inadequate. Numerous types of vegetables and fruits are available in the agricultural areas.

Sheep and goats are raised in both the Colony and the Protectorate. Their milk is used extensively, but only the pastoral tribes are apt to have a sufficient supply. Cow's milk is also consumed in the Colony and in some inland districts, particularly in Western Aden Protectorate, where the grazing conditions are suitable for cattle. Camel's milk is a staple food among certain Bedouin tribes. Ghee, or clarified butter, is employed in the wealthier families. The fat from the tail tissues of the local breed of sheep, which is an important substitute in the Colony and among the eastern tribes, is almost unknown in Western Aden Protectorate. Sesame is cultivated in many areas, and the oil constitutes another source of fats. Meat is seldom consumed more than once a week, except in the more prosperous households. Fish are plentiful along the coast, and both fresh and dried fish are commonly used in the diet.

Housing

Several different types of dwellings are found in Aden Colony. In general, the standards of housing are higher than in the neighboring territories. All variations are encountered between the multistoried stone houses of the wealthy Arabs, the modern style villas of the European and official communities, and the one- or two-story structures of stone or mud brick in which most of the people live. Regardless